

IN THE CLAIMS:

1. (currently amended) In a trailer having a front loading end, a trailer bed, and a rear wheeled end, the trailer having a number of longitudinally aligned trailer bed support rails, and a front end assembly, the front end assembly having a pick up shaft arrangement, a hitch contact area, and opposing ramp sections, the improvement comprising a tapered box beam extending from the pickup shaft arrangement, linking to a center portion of an end of the trailer bed, the center portion spaced from sides of the trailer bed, the tapered box beam including at least two tapered box beam rails, an end of each tapered box beam rail aligned with a respective one of the pair of the trailer bed support rails in the center portion, the box beam using the at least two tapered box beam rails as outer side walls thereof, the box beam having top and bottom portions, the top portion including the hitch contact area, the top and bottom portions terminating at the outer side walls that are spaced inward of the sides of the trailer bed, and a substantial portion of the box beam situated between the hitch contact portion and the end of the trailer bed.

2. (original) The trailer of claim 1, further comprising at least a pair of tapered side rails, the at least two tapered box beam rails disposed between the tapered side rails, and cross members interconnecting the side rails, successive heights of the cross members following the tapers of the side rails and the at least two tapered box beam rails.

3. (currently amended) In a method of lifting a lowboy trailer having a trailer bed and using a gooseneck hitch, wherein a hook of the hitch couples to a pickup shaft, and a tow member of the hitch applies a lifting force to the trailer front end assembly to pivot the gooseneck and raise the trailer, the improvement comprising:

providing a tapered box beam with a substantial portion that extends between an end of the trailer bed wherein trailer rails of the trailer bed terminate and a hitch contact of the front end assembly ~~from the pickup shaft along a trailer length,~~ outer surface side walls of the tapered box beam forming a width that is ~~having a width~~ less than the width of the trailer bed; and

lifting the trailer end using the gooseneck hitch whereby the tapered box beam distributes the lifting load along the box beam length and to a center portion of an end of the trailer bed that is spaced from the sides of the trailer bed.

4. (original) The method of claim 3, wherein the tapered box beam includes tapered side rails connected together by cross members tapered in height to match a taper of the box beam, and the lifting step distributes load to at least a portion of the tapered sides rails via the cross members.

5. canceled

6. (original) The trailer of claim 5, further comprising means to distribute the lifting load laterally of the center portion and then to outer portions of the end of the trailer bed.

7. (currently amended) In a trailer having a front loading end and a rear wheeled end, the trailer having a number of longitudinally aligned trailer load support rails, and a front end assembly, the front end assembly having a pick up shaft arrangement, hitch contact area, and opposing ramp sections, the improvement comprising:

a central box beam including top and bottom portions, and at least two tapered box beam rails as walls of the box beam, the top and bottom portions terminating at the walls of the box beam, the central box beam extending from the pickup shaft arrangement to at least a trailer bed front portion, the at least two tapered box beam rails aligned with two center rails of the trailer load support rails that further extend a length of the trailer, a substantial portion of the box beam extending between the trailer bed front portion and the hitch contact area;

a trailer bed assembly comprising a pair of trailer bed side sections and cross members, each trailer bed side section linked to the center support rails via the cross members; and

the pair of ramp sections removably attachable to the trailer bed assembly at the trailer bed front portion, the box beam longitudinally disposed between the ramp sections.

8. (original) The trailer of claim 7, wherein the cross members extend through the center support rails or extend laterally and outwardly from the center support rails.

9. (previously presented) The trailer of claim 7, further comprising at least one axle assembly attached to at least two of the trailer load support rails or a removable axle assembly attached to ends of the trailer load support rails.

10. (currently amended) A method of constructing a front end loading trailer comprising:

providing a central box beam including top and bottom portions, and at least two tapered support rails that form side walls of the box beam, the top and bottom portions terminating at the side walls, the central box beam extending from a pickup shaft arrangement to at least a trailer bed front portion, a substantial portion of the central box beam lying between the trailer bed front portion and a hitch contact area of the trailer, the at least two tapered support rails aligned with center support rails that extend a length of the trailer;

providing trailer bed side sections, and attaching the trailer bed side section to cross members linked to the center support rails in a removable manner; and

attaching a ramp section to either or both of the central box beam or the trailer assembly, with the box beam disposed longitudinally between the ramp sections.

11. (original) The method of claim 10, wherein the cross members extend through the center support rails, or extend laterally and outwardly from the center support rails.

12. (canceled)

13. (canceled)

14. (previously presented) The trailer of claim 1, wherein the tapered rails have webs and opposing flanges, and the flanges form part of the top and bottom portions of the box beam.

15. (previously presented) The trailer of claim 8, wherein the side bed sections use link plates and pins or opening-containing flanges and pins to connect to the cross members.

16. (previously presented) The trailer of claim 7, wherein each side bed section includes a longitudinal rail between sides thereof, the longitudinal rail positioned to absorb crash down forces during trailer loading.

17. (previously presented) The trailer of claim 16, wherein the side bed sections have outer side rails which are lighter in duty than the longitudinal rail.

18. (previously presented) The trailer of claim 6, further comprising a rear removable axle assembly attached to ends of the center support rails, and wherein the rear removable axle assembly is a single assembly for off-road use or a dual assembly for over-the-road use, one of the dual assemblies attached to ends of the center support rails.

19. (original) The method of claim 10, further comprising the step of providing a removable axle assembly attached to ends of the center support rails.

20. (previously presented) The method of claim 19, wherein the removable axle assembly is a single off-road use axle assembly or a dual over-the-road use axle assembly, one of the single off-road use axle assembly or a dual over-the-road use axle assembly attached to ends of the center support rails.

21. (original) The method of claim 20, wherein, prior to attaching the trailer bed side sections to the center rails, the method further comprises the steps of:

a) configuring the trailer with the center box beam and center rails with a width to allow over-the road travel and thus forming an over-the road trailer;

b) attaching the dual over-the-road use axle assembly to the over-the road trailer;

c) driving the over-the road trailer to a site so that the trailer bed side sections and single off-road use assembly can be attached to the over-the road trailer to make it an off-road trailer.

22. (original) The method of claim 21, wherein one or both of the single off-road use axle assembly and trailer bed side sections are loaded onto the over-the-road trailer prior to the driving step.

23. (previously presented) The trailer of claim 1, further comprising one of a multiple axle over-the road assembly and an off-road axle assembly are removably attached to an end of the trailer.

24. (previously presented) The trailer of claim 1, further comprising at least one adapter block mounted to the trailer for movement between a stored and an operating position,

the block resting on a top surface portion of the trailer in the operating position, the block having a receiving surface for trailer lifting, and positioned underneath the top surface portion in the stored position.

25. (previously presented) The trailer of claim 24, further comprising a pair of adapter blocks, each adapter block separately pivotable between the stored and operating positions.

26. (previously presented) The trailer of claim 1, wherein the trailer support rails are straight at a rear end portion thereof, and further comprising a pair of rear axle mounting plates adapted to connect to respective rear ends of the trailer support rails in a vertical orientation, the rear axle mounting plates adapted to rigidly support a rear axle.

27. (previously presented) The trailer of claim 26, wherein the axle mounting plate is welded to the rear ends or removably attached thereto.

28. (previously presented) The trailer of claim 26, wherein the plates include surfaces for resting of one or more components being hauled on the trailer.

29. (previously presented) The trailer of claim 26, further comprising fenders mounted to and extending laterally across the rear axle mounting plates.

30. (previously presented) The trailer of claim 29, wherein portions of the plates containing the resting surfaces extend through openings in the fenders.